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Initial Results of Coupling the Output of a Regional Weather Model and a Localized Computational Fluid Dynamics Model at the Atlantic City International Airport JOSEPH TROUT, J. RUSSELL MANSON, Richard Stockton College of NJ, MANNY RIOS, Federal Aviation Administration (FAA), DAVID KING, NICHOLAS DECICCO, Richard Stockton College of NJ — Wake Vortex Turbulence is the turbulence generated by an aircraft in flight. This turbulence is created by vortices at the tips of the wing that may decay slowly and persist for several minutes after creation. The strength, formation and lifetime of the turbulence and vortices are effected by many things including the weather. Here we present the preliminary results of an investigation of low level wind fields generated by the Weather Research and Forecasting Model and an analysis of historical data. The simulations are used as inputs for the computational fluid dynamics model (OpenFoam) that will be used to investigate the effect of weather on wake turbulence. The initial results of the OpenFoam model are presented elsewhere. Presented here are the initial results from a research grant, "A Pilot Project to Investigate Wake Vortex Patterns and Weather Patterns at the Atlantic City Airport by the Richard Stockton College of NJ and the FAA"

Joseph Trout
Richard Stockton College of NJ

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